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## Who am I? Developing pre-service teacher identity in a digital world

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### Abstract

The notions of identity and teacher education have attracted considerable research over the years, revealing a strong correlation between teacher beliefs and practices and the resultant impact on pedagogical practices in the classroom. In an era where the use of digital technologies should be synonymous with teacher pedagogical practices and transforming education, there is a growing need for pre-service teachers to develop an identity that resonates with pedagogical practices that engage and connect with students in a positive and productive way. With many educational institutions mandating that educators use digital technologies as a tool to support and enhance teaching, pre-service teacher education needs to ensure that students understand and develop a positive identity within this digital world. Current literature acknowledges that many educators adopt digital technologies in the classroom without sometimes fully understanding its scope or impact. It is within this context that this paper reports on a three-year study of first year pre-service education students and their understanding of identity in a digital world. More specifically, the study identifies how students currently use social and digital media in their personal and professional lives to identify themselves online in order to promote a positive image. The study also seeks to identify how these technologies and an understanding of identity can be utilised to promote a positive first year experience.

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## 1. Introduction

There is a plethora of digital tools available to educators and students in today's society, and while many of these tools are adopted outside the classroom for personal use, it is within the classroom that they are touted as being imperative for the 21<sup>st</sup> century learning environment (P21, 2015), whether it be in the early years or tertiary education. However, while these digital tools afford educators and students many opportunities in education, there are often many factors or barriers that impede the effective use or uptake of them in education (see Hennessy and Onguko, 2010). These factors can stem from a learning space design that does not readily afford their effective use, to the ability of the educator to identify the educational use of these tools beyond how they may individually use these tools in their personal lives. While it is often a combination of factors that impede the effective use of digital tools in the classroom to support and enhance learning, the notion of digital identity can have a significant impact on the pedagogical practices of the teacher and how well they can connect and engage with students. There is a paucity of research in this area, and it is within this context that this paper seeks to explore the relationship between identity and the use of digital tools in pre-service educators.

### 1.1. Identity and education

Identity has been defined as “who or what someone is, the various meanings people can attach to themselves, or the meanings attributed by others” (Beijaard, 1995). In particular, teacher professional identity is the way that teachers, both individually and collectively, view and understand themselves as teachers (Mockler, 2011). In a study of Dutch secondary school teachers, Beijaard, Verloop, and Vermunt (2000) investigated the way teachers derive their professional identity, finding that teachers see themselves as a combination of subject matter experts, pedagogical experts and didactical experts. They defined “pedagogical” as dealing with understanding and the engagement with students, and the ethical and moral dimensions of teaching, whereas the “didactic” concerned itself with planning, execution and evaluation of lessons. Most teachers saw themselves as subject matter and didactical experts rather than pedagogical experts. Wenger (1998) stated that identities are not static, but are constantly changing in a way that ties the past to the future. The participants in the Dutch study claimed that their identities had altered considerably during their careers, shifting from being subject matter or didactic experts to a more balanced distribution (Beijaard, Verloop, & Vermunt, 2000). In the tertiary teaching context, the literature reports that identity shapes lecturers' engagement with teaching technologies, pedagogical strategies, as well as the privileging of certain narratives (Henderson & Bradey, 2008). Moreover, identity is the locality of a dialogue between the individual and their communities of practice, and Henderson and Bradley's study showed how lecturers' identity shaped their responses to perceived institutional expectations, student needs and professional values (2008).

The link between teacher identity and pedagogic practice has been reported in the literature. Bernstein (2000) proposes that “pedagogic identity” is the relation between the teacher, the learner and the socially constituted body of knowledge. There are also many links between teacher beliefs and their pedagogic practices. Beliefs are a subset of identity, according to Rokeach (1968). He postulated a model of belief in which there were inner cores and outer rings. The innermost core of beliefs, which he labeled Type A were beliefs about one's identity and beliefs shared with others. Following this are beliefs formed through direct experience, but are held privately and are unaffected by persuasion. He did not speak specifically about teacher beliefs, but this link is the basis of Ertmer's work linking teacher beliefs and classroom practice, particularly with regard to a teacher's utilisation of technology in teaching. Ertmer (2005) argues that teacher pedagogical beliefs impact classroom practice, however, teachers' beliefs and visions about their teaching did not always match their classroom practice. Ertmer noticed that although teachers are reporting increased levels of access to technology and an increase (or perceived increase) in skill, there was little adoption of technology for higher-level tasks (beyond word processing and internet searching) in classrooms.

It is through the higher-level tasks where technology, and in particular digital tools can be seen to support, enhance and extend the learning experiences that a shift in pedagogical approaches is truly visible and able to transform the educational experience. This places a large emphasis on the educator or academic to be confident about their digital identity to create meaningful learning experiences that connect and engage with students in a positive manner. Consequently, these positive experiences have the potential to build positive experiences for students and create a sense of belonging that can come from a mix of digital tools and social interaction.

### 1.2. *Belonging and first year experience*

Building a positive experience and a meaningful sense of belonging can be a challenge for many educators and an increasing number of higher education institutions have begun to focus on building a positive first year experience for increased retention rates of students and positive feedback. The literature concerning the tertiary education first year experience highlights the need for students to feel a connection to their institution: they must “engage academically, socially and personally with their institution” (Nelson, Quinn, Marrington, & Clarke, 2012). It is in this context that a strong link can be drawn between the use of social media tools such as Facebook, Instagram or Twitter and that of belonging. This impact is visible in students and academics alike. In a recent study by Tobin, Vanman, Verreynne, & Saeri, (2015), they found that students who were restricted from sharing information and receiving feedback through Facebook displayed “lower levels of belonging and meaningful existence”. It is within this context that Astin (1975) identifies peer development as being central to a student's personal and academic development. However, despite the importance of peer support, Menzies and Nelson (2012) found that not all students have equitable access to peers: impediments to such access can be work or family commitments, or differences in gender, age or cultural backgrounds.

The literature discusses other first year experience concerns, such as feelings of intimidation of academically weaker students in group work settings. Wilkinson and Fung (2002) found that minority students found group discussions would typically be dominated by majority group students, and many researchers have reported that in mixed gender groups, male students can be more active participants than female (e.g., Underwood, Underwood, & Wood, 2000). Micari and Drane (2011) considered the social comparison concerns of first year students, and how these affect academic outcomes. These social comparison indices were derived from an instrument that asked students to agree or otherwise with statements concerning academic intimidation in a group work setting and self efficacy. Bandura (1997) further defines this as the beliefs the learner holds about his or her ability to perform well in a particular academic domain. Micari and Drane also found that initial self efficacy was significantly related to social comparison concern and comfort, and students who dropped out reported significantly higher levels of social comparison concern than those who remained. In their findings, was twice as high for minority students, and higher for women than men (2011).

Virtual environments allow all students to engage in peer to peer social and learning centred activities (Menzies & Nelson, 2012), and it is possible that the ambiguity of identity that social media affords might ameliorate the concerns raised above. McCarthy (2010) used the social media site Facebook to create connections between first year students. He found that social media created links between the international and local students – the local students reported that although they were interested in engaging with students from different cultures: “sometimes it can be hard interacting with some of the international students because of the language barrier but with Facebook, because it was online, it was really easy and enjoyable - so many different perspectives and opinions coming together” (McCarthy, 2010, p. 5). “The best thing about the Facebook galleries was that they got everyone talking from day one - all of sudden I had all these new friends on Facebook and from there had friends in class.” (p. 5).

Through a synthesis of current literature surrounding the use of digital technologies by students (and educators) to support, enhance and extend the learning experiences for students, there is a need to understand ones own identity within the digital world and the impact that this has on determining the most effective pedagogical practices that engage and connect with students in a positive and productive way. This paper attempts to understand how pre-service educators use digital technologies to build their identity and whether this leads to a greater sense of belonging and the impact that this may have on first year student experiences.

## 2. *Methodology*

A mixed methods approach was adopted for this research. Using Creswell and Plano Clark's (2011) definition and core characteristics (p.7), the study combines ‘methods, a philosophy and a research design orientation’. During the research, data was collected and analysed using both qualitative and quantitative methods. A qualitative case study methodology based on Yin's (2003) model for exploratory case study using multiple sources of evidence was applied in this study. The study was designed to understand the impact of digital technologies on student identity

and how students entering a pre-service teacher education program used mobile devices and social media and the possible impact that these technologies had on student retention and student first year experiences. It also attempted to explore how academics, teaching first year students, used social media and mobile technologies in their academic and personal lives, while drawing upon the experiences of students and staff in an attempt to identify the role these technologies play in teaching and learning.

Data was collected over a course of four years from each new cohort of first year pre-service teachers however the results reported on and discussed in this paper are based on the pre and post survey data from Semester 1, 2015. In 2014, the study was also conducted in a university for pre-service teachers in a developing country with a number of similarities emerging from the data. The data for this paper is based on a study of pre-service teachers (N=317) studying in the areas of Early Childhood and Primary Education. The study employed a “wide range of interconnected interpretive practices” (Denzin & Lincoln, 2000, p.3) to identify the use of mobile devices and social media technologies by students and staff through a range of surveys, interviews and focus groups to elucidate rich and meaningful data for analysis. Students were asked to voluntarily complete an online survey at the beginning of the semester and a follow up online survey at the end of the semester. In the most recent year of data collection, Semester 1, 2015, this survey was extended to academics teaching in first year units, and semi-structured interviews and focus groups were conducted with students and their teachers throughout the semester and at the end of the teaching period.

### 3. Findings and discussion

The findings discussed here are based on the data collected during Semester 1, 2015. A total of 1789 students have participated in the survey over four years and each year the findings have remained similar with no significant increases in any particular area. There has been some increase in the use of mobile devices and online based cloud storage solutions and a change in some of the social media technologies as would be expected from a research project on digital technologies over this length of time. A majority of the students that participated in the study were female (82%) which is typical of a pre-service education course where the participants are from the early childhood and primary education courses.

The students were encouraged to use their smart phones in the core information and communications technology (ICT) unit which students must undertake in their first semester of pre-service education. This was based on the results of the survey that indicated over 90% of students had a smart phone and only 2 students (0.68%) did not see the use of digital technologies as important in the classroom. In contrast to this, a survey of academics (N=61) found that only 47% of them thought that the use of digital technologies were very important in their teaching. These results indicate that there is quite a large disparity between how students and academics view the importance of digital technologies in education. When the participants were asked about their experience of digital technologies when there were at school, 32.09% of the participants indicated that they regularly used mobile technologies in the classroom.

In terms of online activities students most commonly used Facebook with 78.53% of students often or most often using this social media tool. Following on from Facebook the following technologies indicate the students preferences in using digital technologies based on a rating of most often or often; YouTube (78.33%), Messaging or texting including Facebook Messenger (77.11%), Email (67%), Instagram (57.63%), Online research (52.56%), Snapchat (51.02%). Analysing the types of technologies that students use most often in their lives, the social media tools or tools that allow them to share and/or view digital media are the most common. The one exception to this is the use of online research. Consequently, 69.41% of the participants also indicated that they use their own mobile devices to create digital media such as video, still images or audio, but the data also revealed that only 4.26% of students were not distracted by social media. In contrast to this, only 50% of academics felt comfortable using digital tools to create digital media artefacts. With the need for digital technologies to support, enhance and extend learning opportunities, there is a real need for educators to understand their digital identity and how this can impact upon their chosen pedagogical practices.

The growing access to portable mobile devices such as smart phones with the capabilities to produce high quality digital media anytime and anyplace, has driven the production of an abundance of online media where critical literacy skills are now mandatory for living in the digital age. With over 90% of the participants in this study having

access to these devices there exists a real learning opportunity for educators to embrace. The students can be their own authors and they can co-create learning experiences while developing creative and critical thinking skills that go beyond the consumer model of digital media in the classroom. They can use these devices to solve a problem or demonstrate a concept or to record an investigation and think differently about their learning experiences. They can then share these artefacts with their peers and critically discuss, argue or reason in an environment that is conducive to authentic learning experiences. But to achieve this, there is a need for the academic or educator to re-think their identity and who they are in this new teaching paradigm.

While students are heavy users of digital technologies, and in particular social media technologies, this further indicates the need for them to understand this impact upon their perceived effective pedagogical practices and their identity. When students were asked about their digital profiles and how often they updated these profiles only 36.39% of students indicated that they regularly updated their profile. In terms of building their online identity through a portfolio, only 11.8% indicated that they actively created a portfolio. With social media being so heavily used by pre-service educators, there is a need for them to understand the many implications this has on them and their future use of digital technologies in the classroom, especially when 49.67 % of the participants indicated that social media tools such as Facebook gave them a sense of belonging. 32.88% of the participants also indicated that social media reinforces their ideas and opinions. These findings support earlier research where social media tools such as Facebook were identified as a means through which students could express opinion (McCarthy, 2010) and create a more comfortable classroom environment (Goertler, 2009).

While only 47% of academics indicated that they thought digital technologies were extremely important in the classroom, 100% of staff indicated that they used social media and digital devices in their personal lives. While student use of portfolios to build a profile was low, 43% of academics indicated that they had no personal profile that they updated outside of the university. While its hard to draw conclusions about why this is the case, this does warrant further research and a need to further explore the digital identities of academics, whether it be from a teaching and learning perspective or a research perspective.

In the core ICT unit that the students were enrolled in they were actively taught to build a professional identity and to understand the importance of identity in a digital world. During the post-survey, 63.49% of students indicated that their experience of creating an online portfolio and professional identity within a digital space was positive, while a further 25% were neutral when asked about their experiences. In the post survey there was also a change in the types of social media tools that students chose. While Facebook still remained as the first choice for students, the second most popular social media tool that students referred to was Pinterest and this was based around their association with this technology as a tool for education and to support their studies. Instagram was the third choice for students. With the students having a strong online presence and indicating that there was a real need for digital technologies in education, they also indicated that there was a strong connection between their physical learning spaces and digital technologies with only one student (0.33%) indicating that it was not at all relevant. It is an understanding of the blend between the physical spaces, the digital technologies that the students and academics use and their perceived self-identity within a digital world that directly impacts upon transforming pedagogical practices.

#### **4. Conclusion**

While it can be argued that the use of digital technologies are essential tools for transforming and understanding teaching and learning for tomorrow's student, there is also a strong need for educators, and in particular pre-service educators, to understand their identity within this digital world and be cognisant of how this impacts on their own pedagogical approaches within the classroom. For the same reasons pre-service teachers use social media and digital media so strongly in their personal worlds to connect and engage, there are opportunities to link these experiences to their professional world to create an environment that is conducive to learning and to even develop a sense of belonging. The results from this study indicate that students are aware of what a digital identity is, though, they do not often place sufficient emphasis on developing a positive digital identity and understanding how this may impact on their future pedagogical approaches. Students are connected in many ways with digital and social media

being a significant part of their lives (>90% of students) and these connections are seen as important in developing a sense of belonging in their lives (>50% of students).

Digital identity needs to be actively taught in higher education pre-service teacher courses and these tools associated with social and digital media need to be embraced by students and academics alike. With the sense of belonging being of significance in the results there is the potential to embrace this to develop a positive first year experience, however, pedagogical practices in teacher education need to go beyond the traditional often didactic model that is so evident in higher education. Academics need to also understand their own identity and use this as a catalyst for change to build creative inquiry spaces that can engage and connect with all students across all disciplines and avoid the standard lecture, tutorial and workshop model that is so common in Higher Education. This might mean that many academics will move beyond the so popular business style PowerPoint presentations to embrace new pedagogical practices that are authentic and meaningful. Similarly, there needs to be greater consideration given to the assessment approaches to ensure that assessment is seen as a learning tool as opposed to something that is bolted on to the end of a learning experience for testing purposes. Embracing and perhaps re-invigorating one's identity within a digital world can bring about pedagogical changes that not only challenge the stereotypical approaches, but connect and engage with today's students.

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